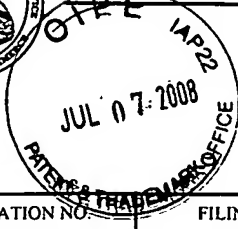




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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

|            |            |                 |  |      |
|------------|------------|-----------------|--|------|
| 10/798,803 | 03/12/2004 | George R. Royer |  | 7116 |
|------------|------------|-----------------|--|------|

7590 06/26/2008  
George R. Royer  
Suite 416  
316 N. Michigan Street  
Toledo, OH 43614

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| EXAMINER |
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TRINH, THANH TRUC

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1795

|           |               |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

06/26/2008 PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/798,803 | <b>Applicant(s)</b><br>ROYER, GEORGE R. |  |
|                              | <b>Examiner</b><br>Thanh-Truc Trinh  | <b>Art Unit</b><br>1795                 |  |

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Remarks*

1. Applicant failed to respond to a non-compliance notice mailed in March 17, 2005. Therefore two additional claims (claim 4 and 5) were not entered and will not be examined.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 2 recite the limitation "said first surface portion" in lines 4 and 8-9. There is insufficient antecedent basis for this limitation in the claim.

Claims 1 and 2 recite the limitation "said battery" in line 5. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change to "said solar battery"

Claims 1 and 2 recite the limitations "such upper surface" in line 5. It is unclear whether this upper surface is the first surface or other surface.

Claims 1 and 2 recite the limitation "said upper surface position" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claims 1 and 2 recite the limitation "said upper portion being position" in line 8. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change to "said upper portion area being positioned"

Claims 1 and 2 recite the limitation "said lower surface portion" in lines 10 and 12-14. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 and 2 recite the limitation "said first surface position" in line 11. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Kressel et al. (US Patent 4070206).

Regarding claims 1-2, as seen in Figure 7, Kressel et al. discloses a solar battery (110) which is similar to solar battery (10) in Figures 1-2 (See col. 5 lines 43-64). The solar battery (110) comprises a first surface (114) adapted to be faced toward the sun to receive solar energy; a second surface (116) positioned opposite to and facing away from the first surface and adapted to receive solar energy input (such as solar radiation 158 and 156); a upper portion (or first layer 118) positioned adjacent and under the first

surface (114); a lower portion (or second layer 120) wherein the first and second portions (118 and 120 which are equivalent to 28 and 20 in Figure 1) are of the same conductivity type, for example P or N (See col. 2 line 19 to col. 3 line 17); an intermediate portion (or third layer 122 as seen in Figure 7 or 22 as seen in Figure 1) disposed between the upper portion and lower portion and is of a conductivity type opposite to that of the first and second layers (118 and 120 - See col. 2 lines 35-40); and a solar energy direction means (or reflecting means 160) positioned to redirect solar rays (such as 158 and 156) to the second surface. For example, in the case the first and second layers (or instant upper and lower portions) are of P-type conductivity, the first and second layers (or instant upper and lower portions) have a net positive charge, the third layer (or instant intermediate portion) is of N-type conductivity, or has a net negative charge as per instant claim 1. In the case the first and second layers are of N-type conductivity, the first and second layers (or instant upper and lower portions) have a net negative charge, the third layer (or instant intermediate portion) is of P-type conductivity, or has a net positive charge as per instant claim 2.

Regarding claim 3, as seen in Figure 7, Kressel et al. discloses a solar battery (110) adapted to receive solar energy for energizing the solar battery for eventual conversion of the solar energy to electricity comprising a solar battery (110) having a first surface (114) for receiving solar energy for energy conversion and a second surface (116) for receiving and using a second source of energy (unfiltered radiation 158 and filtered radiation 156 – See col. 6 lines 28-38) to supplement the solar energy input into the solar battery.

4. Claims 2-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Shelpuk (US Patent 4153476).

Regarding claim 2, as seen in Figures 3 and 7, Shelpuk discloses a solar battery comprising a first surface (upper surface 34) adapted to be faced toward the sun to receive solar energy; a second surface (lower surface 36) opposite to and facing away from the first surface and adapted receive solar energy input; an upper portion (upper layer N silicon layer 44) having a net negative charge; a lower portion (lower N silicon layer 44) having a net negative charge; an intermediate portion (P silicon wafer 42) disposed between the upper portion and lower portion and comprised a net positive charge (P-type); a solar energy direction means (pedestal 22) for redirecting solar rays to the second surface (36) of the solar cell (32). (See col. 3 line 11 to col. 5 line 20).

Regarding claim 3, as seen in Figure 3, Shelpuk discloses a solar cell battery (12) adapted to receive solar energy for energizing the solar battery for eventual conversion of the solar energy to electricity comprising a solar battery having a first surface (upper surface 34) for receiving solar energy for energy conversion and a second surface for receiving and using a second source of energy (such as reflected solar rays B as seen in Figure 3) to supplement the solar energy input into the solar battery. (See col. 3 line 11 to col. 4 line 23)

### ***Conclusion***

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 3278811, 3134906.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Truc Trinh whose telephone number is 571-272-6594. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thanh-Truc Trinh/  
Examiner, Art Unit 1795  
6/12/2008

/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795

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|                                   |                                       |  |  |             |
|-----------------------------------|---------------------------------------|--|--|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/798,803 |  | Applicant(s)/Patent Under<br>Reexamination<br>ROYER, GEORGE R. |             |
|                                   | Examiner<br>Thanh-Truc Trinh          |  | Art Unit<br>1795   | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name           | Classification |
|---|---|--|-----------------|----------------|----------------|
| * | A | US-4,070,206                                     | 01-1978         | Kressel et al. | 136/255        |
| * | B | US-4,153,476                                     | 05-1979         | Frosch et al.  | 136/246        |
| * | C | US-3,278,811                                     | 10-1966         | HIROSHI MORI   | 136/244        |
| * | D | US-3,134,906                                     | 05-1964         | HEINZ HENKER   | 136/246        |
|   | E | US-  |                 |                |                |
|   | F | US-  |                 |                |                |
|   | G | US-  |                 |                |                |
|   | H | US-  |                 |                |                |
|   | I | US-  |                 |                |                |
|   | J | US-  |                 |                |                |
|   | K | US-  |                 |                |                |
|   | L | US-  |                 |                |                |
|   | M | US-  |                 |                |                |

**FOREIGN PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|---|--|-----------------|---------|------|----------------|
|   | N |  |                 |         |      |                |
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|   | R |  |                 |         |      |                |
|   | S |  |                 |         |      |                |
|   | T |  |                 |         |      |                |

**NON-PATENT DOCUMENTS**

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
|   | U |   |
|   | V |   |
|   | W |   |
|   | X |   |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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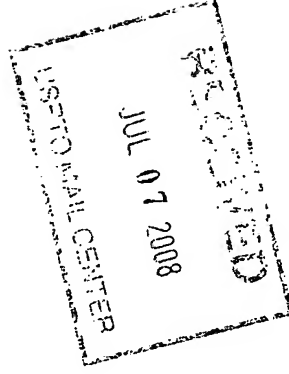
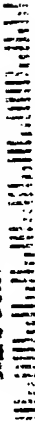
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